

What is claimed is:

1. A data transmission method for transmitting data in a system having a host apparatus and at least one terminal apparatus, comprising the steps of:

5                   forwarding a transmission request from the host apparatus to the terminal apparatus;

                 forwarding a communication request from the terminal apparatus to the host apparatus in response to the transmission request, the communication request containing a timer value of a timer contained in the 10 terminal apparatus; and

15                  conducting polling from the host apparatus to the terminal apparatus, which has forwarded the communication request, according to an identification information based on the received timer value.

2. A data transmission method for transmitting data in a system having a host apparatus and at least one terminal apparatus connected to the host apparatus, comprising the steps of:

20                  forwarding a transmission request from the host apparatus to the terminal apparatus;

                 forwarding a communication request from the terminal apparatus to the host apparatus corresponding to said transmission request, said 25 communication request including a timer value of a timer contained in the terminal apparatus;

                 establishing an identification information for the terminal apparatus, which has forwarded the communication request, according to the timer value contained in the communication request when said host apparatus receives the communication request from the terminal apparatus; and

30                  conducting polling for transmitting data between the host apparatus and the terminal apparatus according to the identification information based on the timer value.

35                  3. The data transmission method according to

claim 2, wherein said system includes a plurality of terminal apparatuses: said method further comprising the steps of;

5 comparing timer values received from the respective terminal apparatuses with each other when said host apparatus receives a plurality of communication requests simultaneously from the plurality of terminal apparatuses; and

10 giving a priority to one of the terminal apparatuses as according to the compared result; and

establishing an identification information for the terminal apparatus having the priority according to the timer value received therefrom.

15 4. The data transmission method according to claim 2, wherein the timer value itself received from the terminal apparatus is established as the identification information of the terminal apparatus.

20 5. The data transmission method according to claim 3, wherein the timer value itself received from the terminal apparatus having the priority is established as the identification information of the terminal apparatus.

25 6. The data transmission method according to claim 2, wherein said host apparatus is either one of a general purpose computer, a minicomputer or a workstation.

7. The data transmission method according to claim 2, wherein said host apparatus is either one of a general purpose computer, a minicomputer or a workstation and the terminal apparatus is a personal computer.

30 8. The data transmission method according to claim 2, wherein said received timer value is further processed to obtain the identification information.

35 9. The data transmission method according to claim 2, wherein, in said establishing step, said timer value undergoes an arithmetic operation to obtain the identification information.

10. A terminal apparatus for use in data

A U S P E C I F I C A T I O N

transmission with an external apparatus, comprising:

a timer;

a memory for storing a value of said timer when the terminal apparatus can communicate with the host apparatus; and

a controller for forwarding a reply to a transmission request which is received from the host apparatus, said controller incorporating said timer value into the reply and forwarding it to the host apparatus.

10 11. The terminal apparatus according to claim 10, wherein said terminal apparatus comprises of a personal computer.

15 12. The terminal apparatus according to claim 10, wherein the terminal apparatus can communicate when it is turned on.

13. A terminal apparatus, for use in data transmission with a host apparatus, comprising:

a communication adapter connected with the host apparatus through a communication line; and

20 21. A portable terminal which is connectable with the host apparatus through said communication adapter, said portable terminal including,

a timer;

25 22. A memory for storing a value of said timer when the terminal apparatus can communicate; and

a controller for forwarding a reply for a transmission request which is received from the host apparatus, said controller incorporating said timer value into the reply and forwarding it to the host apparatus through said communication adapter.

30 23. The terminal apparatus according to claim 22, wherein said portable terminal is a hand-held terminal.

35 24. The terminal apparatus according to claim 22, wherein said terminal apparatus can communicate with the host apparatus when the portable terminal is connected with the communication adapter.

25 25. A terminal apparatus, to be attached to a

communication adapter, which transmits data between an external device through the communication adapter, comprising:

a timer;

5 a memory for storing a value of the timer at the time the terminal apparatus can communicate; and  
a controller for forwarding a communication request to the external device when the terminal apparatus receives a transmission request from  
10 the external device;

wherein the controller sends the timer value stored in the memory with the communication request.

15 17. The terminal apparatus according to claim 16,  
wherein the memory stores a value of the timer at the time when the terminal apparatus is attached to the communication adapter.

20 18. The terminal apparatus according to claim 16,  
wherein the memory stores a value of the timer at the time when the terminal apparatus is turned on.

19. A communication apparatus for use in data transmission with at least one terminal apparatus connected to the communication apparatus, the communication apparatus comprising:

25 a communication controller for forwarding a transmission request to said terminal apparatus and for receiving from said terminal apparatus a reply corresponding to the transmission request;

30 an identification information establishing unit for extracting a timer value obtained from said terminal apparatus from the reply, which is received from the terminal apparatus by said communication controller;  
and

35 a polling unit for implementing polling to the terminal apparatus using the identifying information based on the timer value.

20. A data transmission system for transmitting

data between a terminal apparatus and a host apparatus,  
said terminal apparatus comprising:

a timer;

5       a memory for storing a value of said timer  
when the terminal apparatus can communicate with the host  
apparatus; and

10      a controller for forwarding a reply for a  
transmission request which is received from the host  
apparatus, said controller incorporating said timer value  
into the reply and forwarding it to the host apparatus;  
and

said host apparatus comprising:

15      a communication controller for forwarding  
the transmission request to said terminal apparatus and  
for receiving from said terminal apparatus the reply  
corresponding to the transmission request;

20      an identification information establishing  
unit for extracting the timer value incorporated in the  
reply received by said communication controller from said  
terminal apparatus, and for establishing an  
identification information for the terminal apparatus  
according to the extracted timer value; and

25      a polling unit for implementing polling to  
the terminal apparatus using the identifying information  
established by said identification information  
establishing unit.